

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P547476

Luminaire Tested: **FMR-24-4-LD4-4STD-35-UNV-93-94-EDD**

Issue Date: 6/15/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P547476
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 6/15/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FMR-24-4-LD4-4STD-35-UNV-93-94-EDD
Description: 2X4 FMR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

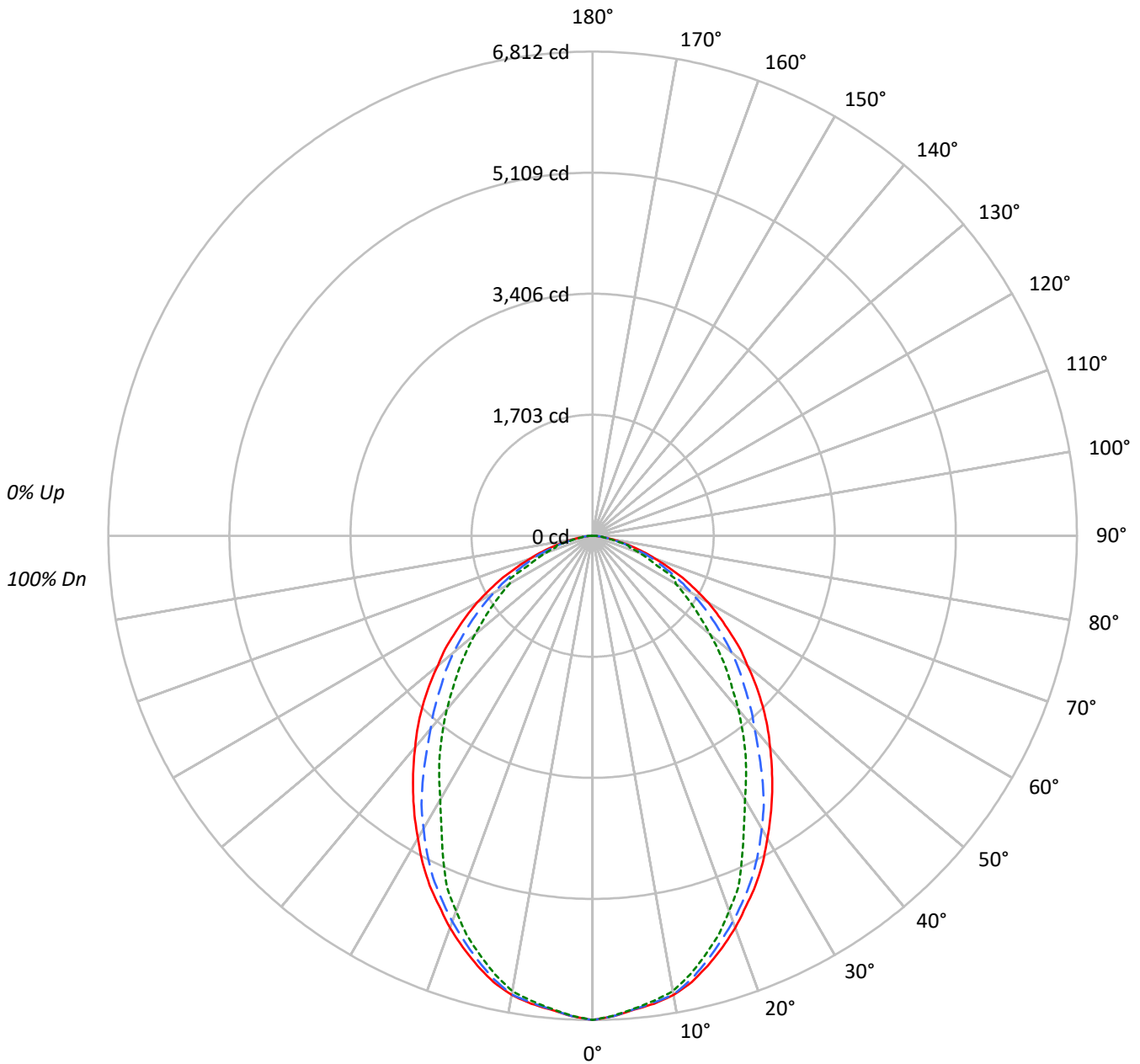
Lumens per Lamp: N/A
Luminaire Lumens: 13374.0 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 133.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9166	9166	9166
5°	9042	9031	9020
10°	8963	8952	8888
15°	8722	8634	8513
20°	8401	8266	8040
25°	8056	7881	7390
30°	7635	7391	6656
35°	7231	6830	6158
40°	6820	6225	5602
45°	6429	5755	5065
50°	5951	5341	4517
55°	5506	4841	4046
60°	5044	4324	3624
65°	4438	3786	3209
70°	3656	3315	2727
75°	2907	2538	2661
80°	1953	1831	1709
85°	1216	1459	1703



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	634.2	4.7
10°-20°	1740.4	13.0
20°-30°	2409.4	18.0
30°-40°	2569.2	19.2
40°-50°	2343.8	17.5
50°-60°	1836.2	13.7
60°-70°	1196.8	8.9
70°-80°	530.2	4.0
80°-90°	113.8	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	4784.0	35.8
0°-40°	7353.2	55.0
0°-60°	11533.2	86.2
0°-90°	13374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13374.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6812	6812	6812	6812	6812	
5°	6694	6686	6686	6679	6679	635
15°	6261	6261	6198	6135	6112	1760
25°	5426	5395	5308	5119	4978	2491
35°	4403	4371	4158	3843	3749	2752
45°	3379	3308	3024	2772	2662	2603
55°	2347	2276	2064	1819	1725	2105
65°	1394	1315	1189	1213	1008	1374
75°	559	520	488	465	512	599
85°	79	87	94	102	110	109
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6812.5	6812.5	6812.5	6812.5	6812.5
2.5°	6765.3	6765.3	6765.3	6757.4	6757.4
5°	6694.4	6686.5	6686.5	6678.6	6678.6
7.5°	6639.3	6631.4	6623.5	6615.6	6599.9
10°	6560.5	6560.5	6552.6	6513.3	6505.4
12.5°	6434.5	6426.6	6395.1	6340.0	6324.2
15°	6261.2	6261.2	6198.2	6135.2	6111.6
17.5°	6072.2	6064.3	5985.6	5922.6	5891.1
20°	5867.4	5851.7	5772.9	5670.6	5615.4
22.5°	5639.0	5639.0	5544.5	5410.7	5355.5
25°	5426.4	5394.9	5308.3	5119.2	4977.5
27.5°	5182.3	5135.0	5040.5	4772.7	4607.3
30°	4914.5	4890.9	4757.0	4410.4	4284.4
32.5°	4662.5	4623.1	4481.3	4119.0	4016.6
35°	4402.6	4371.0	4158.4	3843.4	3748.9
37.5°	4142.7	4103.3	3835.5	3583.5	3465.3
40°	3882.8	3835.5	3544.1	3315.7	3189.7
42.5°	3638.6	3575.6	3292.1	3047.9	2906.2
45°	3378.7	3307.8	3024.3	2772.3	2662.0
47.5°	3118.8	3055.8	2795.9	2536.0	2410.0
50°	2843.2	2788.0	2551.7	2291.8	2158.0
52.5°	2614.8	2528.1	2299.7	2039.8	1929.6
55°	2347.0	2276.1	2063.5	1819.3	1724.8
57.5°	2102.8	2031.9	1835.1	1606.7	1527.9
60°	1874.4	1772.0	1606.7	1409.8	1346.8
62.5°	1622.4	1543.6	1401.9	1236.5	1315.3
65°	1394.0	1315.3	1189.2	1212.9	1008.1
67.5°	1142.0	1102.6	992.3	882.1	850.6
70°	929.3	882.1	842.7	724.6	693.1
72.5°	740.3	693.1	637.9	574.9	551.3
75°	559.2	519.8	488.3	464.7	511.9
77.5°	385.9	370.2	346.5	322.9	315.0
80°	252.0	244.1	236.3	228.4	220.5
82.5°	149.6	149.6	149.6	149.6	149.6
85°	78.8	86.6	94.5	102.4	110.3
87.5°	47.3	47.3	55.1	63.0	70.9
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)